

Unmanned Aerial Vehicles

Ground weather is critical information when launching and recovering UAV's. The pocket-sized Kestrel 4000 can gather and log the full complement of data needed - wind speed, maximum wind gust, temperature, humidity, barometric pressure and density altitude. No matter how isolated the UAV operators, they'll have the information they need to make sure their valuable aircraft will complete its mission safely and be ready to fly again.



Thermal Imaging (FLIR) Systems

Relative humidity and ambient temperature affect the transmissivity of the air and impact the effectiveness of forward looking infrared cameras or thermal imaging systems. Many commonly used systems require user input of these parameters for most accurate results. Kestrel meters offer a lightweight, on-the-spot solution for measuring these and other relevant conditions instantly and accurately. The Kestrel's patented humidity sensor configuration yields unmatched accuracy and response speed in an instrument this size and price.



Military Applications FAQ's:

Does the Kestrel measure WBGT?

No. "Wet Bulb Globe Temperature" requires use of a large (heavy) black brass globe and a naturally aspirated wet bulb, neither of which can be accurately replicated in a small handheld device. Numerous Kestrel models display the NWS Heat Stress Index as well as the Web Bulb Temperature. These values, combined with a common sense evaluation of the impact of the sun, provide excellent guidance on the dangers of heat stress or exhaustion and the need for hydration.

How does the altimeter work? Is the reference pressure the same as an altimeter setting?

The Kestrel models with altimeter calculate altitude from barometric pressure in exactly the same manner and according to the same rules as an aircraft altimeter. The "reference pressure" on the Altitude screen is the same as the altimeter setting obtained from a local airfield.

Can the Kestrel 4000 communicate directly with a PDA or computer?

No. Due to the rapidly changing standards for product communication, data upload is presently limited to a USB or serial interface to communicate with a PC. Additional communication options may be developed in the future as a predominant standard emerges among Kestrel users.

Does the Kestrel 4000 provide location?

At present, there are no Kestrel meters offering built-in GPS. This product may be developed in the future.

Kestrel® Pocket Weather® Meters

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Sniper Training & Operations

Crosswind strongly influences the accuracy of sharpshooting, becoming the largest error component at long ranges. Even medium crosswind velocities (~5 m/sec) along the flight path of a bullet can cause 1 meter deviations at 500 meters. Temperature, humidity and density altitude also play a part in ballistics performance, and are incorporated into most advanced portable targeting computer applications. The Kestrel 4000, with its ability to accurately measure all of these parameters in a four-ounce, pocket-size package, is consistently on the military sniper's "most-wanted" list of desired equipment. The new Kestrel 4500 adds often requested crosswind calculation and wind direction.

Drop Zone Safety

Every drop zone requires close monitoring of wind speeds by the DZSO. The Kestrel 1000 offers the simplest and most cost-effective solution for this need. Costing just \$89 and featuring icon-based navigation to avoid language confusion, personnel can be taking accurate readings as soon as they reach the hilltop, with almost no training required. The Kestrel 4000 and 4500 add the option to log readings with date and time stamp for later report preparation, as well as the ability to provide detailed ground weather reports (wind direction, crosswind, temperature, humidity, density altitude) to launch aircraft.



Medic Support, Personnel Heat Stress & Exposure Monitoring in Training & Operations

Extreme conditions of heat and cold are a fact of military life. Kestrel Pocket Weather Meters accurately measure temperature, humidity, heat stress, wet bulb temperature and wind chill, enabling good decision-making about work/rest periods, clothing, and hydration in both training and operations. Because a Kestrel is easy to carry and use, and requires no complex setup, personnel are more likely to take the measurements that will prevent accidents. For medics, automatic logging creates a reliable record of conditions for future report preparation.



K9 Operations - Search & Rescue, Mine Removal

Effective and safe K9 operations require close monitoring of the wind speed, temperature and humidity conditions in the area where the dogs are working. Military K9 handlers can carry a Kestrel 4000 in their pocket to enable them to know their conditions, wherever they are operating.



Kestrel® Pocket Weather® Meters - whatever your mission...

Combat Weather

Weather personnel in all forces have come to rely on the Kestrel 4000 as a primary or backup meteorological instrument. Unmatched for accuracy and capability in its size and price range, the Kestrel 4000 and new Kestrel 4500 measure virtually every critical weather parameter in the field or aboard ship with no setup required. Combat weathermen, in particular, find the Kestrel a critical tool in forward ground combat scenarios due to its extreme portability and virtually instant deployability.



Expeditionary Flight Operations

The Kestrel 4000 and 4500 are complete weather systems ideal for forward basing or lake bed flight operations. Both cell-phone sized units measure wind speed and the 4500 gives wind direction and calculates crosswind, headwind and tailwind automatically. They also measure density altitude, temperature, humidity and barometric pressure, and log measurements over time for future reference and trend analysis. Even where CWX personnel are not available, troops on the ground equipped with a Kestrel Pocket Weather Tracker can provide needed landing zone weather data.



NBC & HAZMAT Response

wind speed and direction, together with temperature, humidity and air density, all impact the behavior and spread of a nuclear, biological, chemical or hazardous material release. The new Kestrel 4500, together with a lightweight Tripod Vane Mount, measures every parameter required for plume prediction and packs down to a case the size of a small paperback book.



HVAC & Space Conditions Monitoring

Civil Engineering specialties and ratings can use field-proven Kestrel technology to make their job easier indoors. The Kestrel 4100 measures and logs air velocity, air flow (CFM), temperature, humidity and dewpoint as well as heat index and wind chill. The ideal portable, durable, waterproof instrument to use while commissioning and verifying performance on HVAC/R systems critical to personnel comfort and efficient energy usage.



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